

A2
Sub
B1



HYZ-479CP(47508-577).ST25

#8

SEQUENCE LISTING

<110> Kandimalla, Ekambar R.
Zhao, Qiuyan
Yu, Dong
Agrawal, Sudhir

<120> Modulation of Immunostimulatory Activity of Immunostimulatory
Oligonucleotide Analogs by Positional Chemical Changes

<130> HYZ-479CP (47508.577)

<140> US 09/965,116
<141> 2001-09-26

<150> US 09/712,898
<151> 2000-11-15

<150> US 60/235,452
<151> 2000-09-26

<150> US 60/235,453
<151> 2000-09-26

<160> 112

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<400> 1
ctatctgacg ttctctgt 18

<210> 2
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 9
<223> c = 5-hydroxydeoxycytidine

<400> 2
ctatctgacg ttctctgt 18

<210> 3
<211> 18
<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 10

<223> c = 5-hydroxydeoxycytidine

<400> 3

ctatctgacc ttctctgt

18

<210> 4

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 9

<223> c = N4-ethyldeoxycytidine

<400> 4

ctatctgacg ttctctgt

18

<210> 5

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 10

<223> c = N4-ethyldeoxycytidine

<400> 5

ctatctgacc ttctctgt

18

<210> 6

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<400> 6

aaggtcgagc gttctc

16

<210> 7

<211> 18

<212> DNA

<213> Artificial Sequence

<220>
 <223> oligonucleotide

 <400> 7
 atggcgacg ctgggaga 18

 <210> 8
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> oligonucleotide

 <400> 8
 cctactagcg ttctcatc 18

 <210> 9
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> oligonucleotide

 <221> modified_base
 <222> 10
 <223> g = 1',2'-Dideoxyribose

 <400> 9
 cctactagcg ttctcatc 18

 <210> 10
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> oligonucleotide

 <221> modified_base
 <222> 8
 <223> g = 1',2'-Dideoxyribose

 <400> 10
 cctactagcg ttctcatc 18

 <210> 11
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> oligonucleotide

 <221> modified_base
 <222> 7

<223> a = 1',2'-Dideoxyribose

<400> 11
cctactagcg ttctcatc 18

<210> 12
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 6
<223> t = 1',2'-Dideoxyribose

<400> 12
cctactagcg ttctcatc 18

<210> 13
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 5
<223> c = 1',2'-Dideoxyribose

<400> 13
cctactagcg ttctcatc 18

<210> 14
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4
<223> a = 1',2'-Dideoxyribose

<400> 14
cctactagcg ttctcatc 18

<210> 15
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
 <222> 4
 <223> a = 1',2'-Dideoxyribose

<400> 15
 cctactagcc ttctcatc

18

<210> 16
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 11
 <223> t = 1',2'-Dideoxyribose

<400> 16
 cctactagcg ttctcatc

18

<210> 17
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 12
 <223> t = 1',2'-Dideoxyribose

<400> 17
 cctactagcg ttctcatc

18

<210> 18
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 13
 <223> c = 1',2'-Dideoxyribose

<400> 18
 cctactagcg ttctcatc

18

<210> 19
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14
<223> t = 1',2'-Dideoxyribose

<400> 19
cctactagcg ttctcatc 18

<210> 20
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4, 5
<223> ac = 1',2'-Dideoxyribose

<400> 20
cctactagcg ttctcatc 18

<210> 21
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 1, 2
<223> cc = 1',2'-Dideoxyribose

<400> 21
cctactagcg ttctcatc 18

<210> 22
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14, 15
<223> tc = 1',2'-Dideoxyribose

<400> 22
cctactagcg ttctcatc 18

<210> 23
<211> 18

<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4, 7
<223> a at position 4 = 1',2'-Dideoxyribose
a at position 7 = 1',2'-Dideoxyribose

<400> 23
cctactagcg ttctcatc

18

<210> 24
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 10
<223> g = C3-Linker

<400> 24
cctactagcg ttctcatc

18

<210> 25
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 7
<223> a = C3-Linker

<400> 25
cctactagcg ttctcatc

18

<210> 26
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 5
<223> c = C3-Linker

<400> 26

18

cctactagcg ttctcatc

<210> 27
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 4, 5
 <223> a at position 4 = C3-Linker
 c at position 5 = C3-Linker

18

<400> 27
 cctactagcg ttctcatc

<210> 28
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 1, 2
 <223> cc at positions 1 & 2 = C3-Linker

18

<400> 28
 cctactagcg ttctcatc

<210> 29
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 12
 <223> t = C3-Linker

18

<400> 29
 cctactagcg ttctcatc

<210> 30
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base

<222> 14
<223> t = C3-Linker

<400> 30
cctactagcg ttctcatc

18

<210> 31
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14, 15
<223> t at position 14 = C3-Linker
c at position 15 = C3-Linker

<400> 31
cctactagcg ttctcatc

18

<210> 32
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 8
<223> a = C3-Linker

<400> 32
ctatctgacg ttctctgt

18

<210> 33
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 6
<223> t = C3-Linker

<400> 33
ctatctgacg ttctctgt

18

<210> 34
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4
<223> t = C3-Linker

<400> 34
ctatctgacg ttctctgt

18

<210> 35
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4
<223> t = Spacer9

<400> 35
ctatctgacg ttctctgt

18

<210> 36
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14
<223> t = Spacer9

<400> 36
ctatctgacg ttctctgt

18

<210> 37
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4
<223> t = Spacer18

<400> 37
ctatctgacg ttctctgt

18

<210> 38
<211> 18

<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14
<223> t = Spacer18

<400> 38
ctatctgacg ttctctgt 18

<210> 39
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4
<223> a = Spacer9

<400> 39
cctactagcg ttctcatc 18

<210> 40
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14
<223> t = Spacer9

<400> 40
cctactagcg ttctcatc 18

<210> 41
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4
<223> a = Spacer18

<400> 41
cctactagcg ttctcatc 18

<210> 42
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 14
 <223> t = Spacer18

<400> 42
 cctactagcg ttctcatc

18

<210> 43
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 8
 <223> a = Amino-Linker

<400> 43
 ctatctgacg ttctctgt

18

<210> 44
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 7
 <223> g = Amino-Linker

<400> 44
 ctatctgacg ttctctgt

18

<210> 45
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 4
 <223> t = Amino-Linker

<400> 45
ctatctgacg ttctctgt

18

<210> 46
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 12
<223> t = Amino-Linker

<400> 46
ctatctgacg ttctctgt

18

<210> 47
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14
<223> t = Amino-Linker

<400> 47
ctatctgacg ttctctgt

18

<210> 48
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 10
<223> g = 3'-Deoxynucleoside

<400> 48
ctatctgacg ttctctgt

18

<210> 49
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base

<222> 9
<223> c = 3'-Deoxynucleoside

18

<400> 49
ctatctgacg ttctctgt

<210> 50
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 5
<223> c = 3'-Deoxynucleoside

18

<400> 50
ctatctgacg ttctctgt

<210> 51
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 15
<223> c = 3'-Deoxynucleoside

18

<400> 51
ctatctgacg ttctctgt

<210> 52
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 10
<223> g = 3'-Deoxynucleoside

18

<400> 52
cctactagcg ttctcatc

<210> 53
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 9

<223> c = 3'-Deoxynucleoside

18

<400> 53

cctactagcg ttctcatc

<210> 54

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 8

<223> g = 3'-Deoxynucleoside

18

<400> 54

cctactagcg ttctcatc

<210> 55

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 5

<223> c = 3'-Deoxynucleoside

18

<400> 55

cctactagcg ttctcatc

<210> 56

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 15

<223> c = 3'-Deoxynucleoside

18

<400> 56

cctactagcg ttctcatc

<210> 57

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 8

<223> a = Methyl-phosphonate

18

<400> 57

ctatctgacg ttctctgt

<210> 58

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 7

<223> g = Methyl-phosphonate

18

<400> 58

ctatctgacg ttctctgt

<210> 59

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 6

<223> t = Methyl-phosphonate

18

<400> 59

ctatctgacg ttctctgt

<210> 60

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 5

<223> c = Methyl-phosphonate

18

<400> 60

ctatctgacg ttctctgt

<210> 61
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 4
 <223> t = Methyl-phosphonate

18

<400> 61
 ctatctgacg ttctctgt

<210> 62
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 3, 4
 <223> a at position 3 = Methyl-phosphonate
 t at position 4 = Methyl-phosphonate

18

<400> 62
 ctatctgacg ttctctgt

<210> 63
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 11
 <223> t = Methyl-phosphonate

18

<400> 63
 ctatctgacg ttctctgt

<210> 64
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 12
 <223> t = Methyl-phosphonate

18

<400> 64
ctatctgacg ttctctgt

<210> 65
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 13
<223> c = Methyl-phosphonate

18

<400> 65
ctatctgacg ttctctgt

<210> 66
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14
<223> t = Methyl-phosphonate

18

<400> 66
ctatctgacg ttctctgt

<210> 67
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 15
<223> c = Methyl-phosphonate

18

<400> 67
ctatctgacg ttctctgt

<210> 68
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base

<222> 15, 16
 <223> c at position 15 = Methyl-phosphonate
 t at position 16 = Methyl-phosphonate

18

<400> 68
 ctatctgacg ttctctgt

<210> 69
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

19

<400> 69
 tccatgacgt tcctgatgc

<210> 70
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 7
 <223> a = 2'-O-Methylribonucleoside

19

<400> 70
 tccatgacgt tcctgatgc

<210> 71
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 5
 <223> t = 2'-O-Methylribonucleoside

19

<400> 71
 tccatgacgt tcctgatgc

<210> 72
 <211> 19
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base

<222> 2, 3
 <223> c at positions 2 & 3 =
 2'-O-Methoxyethylribonucleoside

19

<400> 72
 tccatgacgg tcctgatgc

<210> 73
 <211> 16
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

16

<400> 73
 gagaacgctc gacctt

<210> 74
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 16
 <223> 3'-5' linkage

32

<400> 74
 gagaacgctc gaccttgaga acgctcgacc tt

<210> 75
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 16
 <223> 5'-5' linkage

32

<400> 75
 ttccagctcg caagaggaga acgctcgacc tt

<210> 76
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base

<222> 16
<223> 3'-3' linkage

32

<400> 76
gagaacgctc gaccttttcc agctcgcaag ag

<210> 77
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

18

<400> 77
tctcccagcg tgcgccat

<210> 78
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 16
<223> 3'-5' linkage

32

<400> 78
tcccagcgtg cgccattccc agcgtgcgcc at

<210> 79
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 16
<223> 5'-5' linkage

32

<400> 79
taccggtgc gacccttccc agcgtgcgcc at

<210> 80
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 16

<223> 3'-3' linkage

32

<400> 80
tcccagcgtg cgccattacc gcgtgcgacc ct

<210> 81
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 5
<223> c = beta-L-Deoxynucleoside

18

<400> 81
ctatctgacg ttctctgt

<210> 82
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 14
<223> t = beta-L-Deoxynucleoside

18

<400> 82
ctatctgacg ttctctgt

<210> 83
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4, 5
<223> t at position 4 = beta-L-Deoxynucleoside
c at position 5 = beta-L-Deoxynucleoside

18

<400> 83
ctatctgacg ttctctgt

<210> 84
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 14, 15

<223> t at position 14 = beta-L-Deoxynucleoside

c at position 15 = beta-L-Deoxynucleoside

18

<400> 84

ctatctgacg ttctctgt

<210> 85

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 9, 10

<223> c at position 9 = beta-L-Deoxynucleoside

g at position 10 = beta-L-Deoxynucleoside

18

<400> 85

ctatctgacg ttctctgt

<210> 86

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 7

<223> g = beta-L-Deoxynucleoside

18

<400> 86

ctatctgacg ttctctgt

<210> 87

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 12

<223> t = beta-L-Deoxynucleoside

18

<400> 87

ctatctgacg ttctctgt

<210> 88

<211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> (1)...(18)
 <223> all nucleotides = beta-L-deoxynucleoside

18

<400> 88
 ctatctgacg ttctctgt

<210> 89
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 5
 <223> c = 2'-O-Propargyl-ribonucleoside

18

<400> 89
 ctatctgacg ttctctgt

<210> 90
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 15
 <223> c = 2'-O'Propargyl-ribonucleoside

18

<400> 90
 ctatctgacg ttctctgt

<210> 91
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> oligonucleotide

<221> modified_base
 <222> 4, 5
 <223> a at position 4 = 1',2'-Dideoxyribose
 c at position 5 = 1',2'-Dideoxyribose

18

<400> 91
cctactagcg ttctcatc

<210> 92
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4, 5
<223> a at position 4 = C3-Linker
c at position 5 = C3-Linker

18

<400> 92
cctactagcg ttctcatc

<210> 93
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4, 5
<223> a at position 4 = 3'-methoxyribonucleoside
c at position 5 = 3'-methoxyribonucleoside

18

<400> 93
cctactagcg ttctcatc

<210> 94
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 4, 5, 12
<223> a at position 4 = 1',2'-Dideoxyribose
c at position 5 = 1',2'-Dideoxyribose
t at position 12 = 2'-methoxyribonucleoside

18

<400> 94
cctactagcg ttctcatc

<210> 95
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

18

<400> 95
cctactaggc ttctcatc

<210> 96
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 10
<223> g = 7-deazaguanine

18

<400> 96
ctatctgacg ttctctgt

<210> 97
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 9
<223> g = 7-deazaguanine

18

<400> 97
ctatctgagc ttctctgt

<210> 98
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

18

<400> 98
tctcccagcg tgcgccat

<210> 99
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 10,14

<223> g at positions 10 and 14 = 7-deazaguanine

18

<400> 99
tctcccagcg tgcgcat

<210> 100
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 5
<223> c = C3-Linker

<221> modified_base
<222> 10
<223> g = 7-deazaguanine

18

<400> 100
ctatctgacg ttctctgt

<210> 101
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 10
<223> g = 6-thioguanine

18

<400> 101
ctatctgacg ttctctgt

<210> 102
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 9
<223> g = 6-thioguanine

18

<400> 102
ctatctgagc ttctctgt

<210> 103
<211> 18
<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 9

<223> c = 4-thiouridine

18

<400> 103
ctatctgacg ttctctgt

<210> 104

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 5

<223> c = 1,2-Dideoxyribose

<221> modified_base

<222> 9

<223> c = 4-thiouridine

18

<400> 104
ctatctgacg ttctctgt

<210> 105

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 9

<223> c = Ara-C

18

<400> 105
ctatctgacg ttctctgt

<210> 106

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide

<221> modified_base

<222> 10

<223> c = Ara-C

19

<400> 106
ctactctgac cttctctgt

<210> 107
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 9
<223> c = 1',2'-Dideoxyribose

18

<400> 107
ctatctgacg ttctctgt

<210> 108
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 8
<223> a = 1',2'-Dideoxyribose

18

<400> 108
ctatctgacg ttctctgt

<210> 109
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 6
<223> t = 1',2'-Dideoxyribose

18

<400> 109
ctatctgacg ttctctgt

<210> 110
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base

<222> 4
<223> t = 1',2'-Dideoxyribose

18

<400> 110
ctatctgacg ttctctgt

<210> 111
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 11
<223> t = 1',2'-Dideoxyribose

18

<400> 111
ctatctgacg ttctctgt

<210> 112
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide

<221> modified_base
<222> 13
<223> c = 1',2'-Dideoxyribose

18

<400> 112
ctatctgacg ttctctgt